

CLAIMS

1. A plasma processing method in which plasma is generated by the use of a plasma excitation gas and process gas is introduced into said plasma to thereby process an object to be processed, said plasma processing method being characterized in that said process gas includes nitrous oxide gas and said nitrous oxide gas is introduced into the plasma whose electron temperature is less than 2.24 eV.

2. The plasma processing method according to claim 1, characterized by introducing said plasma excitation gas into a process chamber from an upper shower plate, generating said plasma under said upper shower plate, causing said plasma to pass through a lower shower plate provided under said upper shower plate so as to reach said object to be processed, and introducing said nitrous oxide gas from said lower shower plate into the plasma under said lower shower plate.

3. A method for manufacturing an electronic device, characterized by comprising a step of carrying out an oxynitriding process to said object to be processed by the use of the plasma processing method according to claim 1 or 2.